IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Olsen et al.	Confirmation No.:	1415
Serial No. 09/855,633	Art Unit:	2164
Filing Date: May 14, 2001	Examiner:	Elda G. Milef
Title: METHODS FOR TRADE DECISION MAKING	Attorney Docket No:	060967-0009-US

PRE-APPEAL BRIEF REQUEST FOR REVIEW

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Sir:

This is to request pre-appeal brief review of the final rejection of claims 10-14, 17-20 and

25-27 of the above-identified application.

Claim 10 has been rejected under 35 U.S.C. 103(a) as unpatentable over Rickard (USP

6,016,483) in view of Kane (USP 6,317,728). The other claims, which are all dependent on

claim 10, have been rejected on these references or combinations of these referencew with

Wallman (USP 6,360,210), Black (USP 6,012,042), Stewart (USP 6,195,103) and/or Makivic

(USP 6,061,662).

Applicants' invention is directed to a method of trading assets on a market. The method

includes the steps of calculating trade recommendation information from each of a plurality of

trading sub-models each of which is based on a different time of day and then calculating a trade

recommendation on the basis of the trade recommendation information from each of the trading

sub-models.

These steps are more fully described in the specification. At its most general level, as described in paragraph 0022 (page 4, line 24 of the specification), the preferred trading model comprises a set of indicator computations combined with a set of rules. The indicator computations analyze past price movements. The rules determine if an action is to be taken and its timing.

An example of an indicator is set forth in paragraph 0100 at equation 8 (page 16, line 28 of the specification). This indicator is defined as a momentum that is the difference of the current logarithmic middle price x and its moving average (MA) computed in v-time where v-time is a modified business time scale as described in paragraph 0095 (page 15, line 28 of the specification). Another example of an indicator is the value I_x defined in equation 16 in paragraph 0116 (page 19, line 8 of the specification) which also is a momentum determined by a scaling factor and the difference between the current logarithmic middle price x and the exponential weighted moving average (EMA). Trading signals are given when the indicator crosses certain threshold values.

Examples of rules include a prohibition on any deal within 15 minutes of a prior deal as set forth in paragraph 0050 (page 9, line 27 of the specification) and a prohibition on a deal where price movements since the previous deal are too small as set forth in paragraph 0043 (page 8, line 28 of the specification).

Optimization of trading models is described at paragraphs 0123 through 0160 (page 20, line 10 to page 28, line 8 of the specification). An expression for an effective return $X_{eff, \Delta t}$ is set forth in equation 19 in paragraph 0128 (page 21, line 21 of the specification). As indicated, the effective return is a function of time Δt.

Various time functions are used in the different embodiments of the invention claimed in the present application. In the embodiment claimed in withdrawn claims 1-9 and described in detail at paragraphs 0161 through 0184 (page 28, line 9 to page 31, line 28 of the specification), the time period is the time horizon of the trader. Some traders have short time horizons, other have long time horizons and others are in between. In the invention claimed in claims 1-9, trade recommendation information is based on sub-models each of which is based on a different time horizon. A trading signal is developed as set forth in paragraph 0176 (page 30, line 17 of the specification) by summing the trading signals from all of the sub-models.

In the embodiment recited in claims 10-14 and 17-20, the sub-models are based on different times of the day. Basically, as set forth in paragraph 0191 (page 34, line 1 of the specification) it has been determined that, for best results, trading models should be based on 24 hour intervals and therefore are characterized by a specific hour of the day. However, as stated at paragraph 0207 (page 36, line 1 of the specification) this would result in a trading system that would make a trading recommendation once in every 24 hours. For example, it might give a recommendation at 10:00 A.M. on every trading day. To provide a trading system that can make trading recommendations more frequently, a series of sub-models are used each of which is updated at a different hour of the day and the recommendations of these models are combined, for example, by summing them. Preferably, 24 such sub-models are used, one for each hour of the day, as recited in claim 11.

In contrast to applicants' invention, Rickard et al. disclose a system for an automated opening of an options exchange. As specified in the Abstract, market makers input into the system their current position, a desired target position and their orders. Public orders are also input. The system then allocates order imbalances at the opening of trading. The system is

described as alleviating a cumbersome manual method for setting prices at the opening of trading.

As the Examiner acknowledges, Rickard does not calculate trade recommendation information using sub-models based on different times of the day. For this the Examiner relies on Kane which is a system for producing intra-day trading recommendations made by a plurality of agents 16. Agents 16 are described at Col. 5, lines 4-10 as sections of computer logic that make buy or sell decisions based on buy and sell rules embedded in each agent. The logic is further described at Col. 7, lines 11 and 12 as evaluating "market and specific equity behaviors"; and examples of such evaluations are given at Col. 9, lines 45-54 as including a check on "directional tendency" of a stock, availability of a valid open price and availability of funds to purchase the stock. Each security is evaluated by Kane's agents about once a minute as stated at Col. 9, lines 54-55. For each security, the recommendations of the agents are combined additively and the security having the greatest difference between long and short votes is selected for trading (Col. 9, lines 40-44).

This, however, is not what applicants are claiming. As emphasized above, their trading system uses sub-models based on different times of the day and the trade recommendation incorporates information from each of sub-models. Kane does not use a plurality of models based on different times of the day and he does not combine the results of such a plurality of models in order to make his up-to-the-minute recommendation. Neither does he suggest such an arrangement.

Claim 10 emphasizes these distinctions over Kane. In particular, claim 10 recites that trade recommendation information is calculated from each of a plurality of sub-models each of which is based on a different time of day. Further, claim 10 requires that the trade

recommendation be calculated based on said information from each of the sub-models. For, at least, these reasons claim 10 is believed to be patentable over Rickard and Kane who do not disclose or suggest the use of a plurality of sub-models based on different times of the day.

Dependent claims 11-14, 17-20 and 25-27 are believed patentable for the same reason claim 10 is patentable. In addition, claim 11 is believed patentable because Wallman also does not disclose the use of a plurality of sub-models based on different times of day. While Wallman may teach the use of various pricing models, like Kane he does not teach the use of models based on different times of the day. A price filter receives prices and filters them by rejecting those that are erroneous. The description at Col. 9, lines 3-21 of the operation of controller 2 to which the Examiner refers is a description of a device that receives orders and outputs prices but it does not disclose or suggest a price filter.

Further, claims 18-20 are believed patentable over the references because they do not suggest the claimed methods of summing weighted trade recommendations of the sub-models. As emphasized above, each sub-model is based on a different time of day. None of the references cited discloses or suggests the use of a plurality of such models or the step of combining their recommendations by summing weighted trade recommendations.

For the foregoing reasons, claims 10-14, 17-20 and 25-27 are believed to be patentable over the references cited.

Respectfully submitted,

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